

as the “second peeling layer” to differentiate, for example, the peeling layer 5 depicted in Fig. 3 of the present application.

Claim 11 has been amended to depend from Claim 1, instead of Claim 7 (and Claim 1 has been amended to incorporate the limitation of Claim 7). In Claim 1, the transferable scratch layer has been amended to further clarify that the transferable scratch layer has a “multilayer structure.” Thus, Claims 1 and 11 together recite that the multilayer structure of the claimed transfer scratch layer (such as Fig. 4, element 2) is comprised of a pattern layer (such as Fig. 4, element 4), a second peeling layer (such as Fig. 4, element 6), and a hiding layer (such as Fig. 4, element 3). These layers are disposed in the same order as they are written in the previous sentence (see for example Fig. 4, elements 4, 6, and 3) with the pattern layer 4 disposed closest to the substrate film 1. Withdrawal of the §112, ¶2 rejection of Claim 11 is therefore respectfully requested.

As to Claim 5, the Office Action indicates that the limitation “HB” recited in Claim 5 is not defined in the Specification and is therefore unclear. In response, Applicants respectfully submit that the meaning of “HB” is (and should be) sufficiently clear to those skilled in the pertinent art as the “HB” generally refers to the hardness or the quality of leads in, for example, pencils used for writing purposes. As an example, the Japanese Industrial Standard (JIS) S6006--among others standards--defines “HB” as relating to pencils and the leads utilized in the pencils. In particular, the item 3, b) in S6006 describes that the “hardness mark (hardness symbol)” is a grading or sorting mark denoting increase of hardness from “6B” to “9H” and increase of density of a drawing line from “9H” to “6B”, and also describes that a central hardness is “HB”. A copy of JIS S6006 is attached herewith for your review. Withdrawal of the §112, ¶2 rejection of Claim 5 is therefore respectfully requested.

As to Claim 21, the words “is different” are used in their ordinary and usual meaning.

That is, the color of the coloring agent transfer layer is distinctive from a color of the transferable scratch layer by visual observation under a natural light. Claim 21 recites that the “**color** of said coloring agent transfer layer is different from the color of said transferable scratch layer.” The support for this is found at least in the Specification, page 18, 24 to page 19, line 5 (paragraph 132), which is quoted in the following:

[0132] The hue of the hiding layer is not limited to the hue exhibited by the hiding material itself, but may be properly controlled by adding a coloring agent. Particularly, it is preferable to make a difference in hue between the coloring agent transfer layer forming the information recorded section and the transferable scratch layer in the point that separate application areas of each layer are easily found when the thermal transfer sheet is produced, thereby improving, for example, the operability of separate applications.

Withdrawal of the §112, ¶2 rejection of Claim 21 is therefore respectfully requested.

As to Claim 6, it is noted that the transferable scratch layer recited Claim 1 has been amended to further clarify that the transferable scratch layer has a “multilayer structure.” Thus, Claims 1 and 6 together recite that the multilayer structure of the claimed transfer scratch layer (such as Fig. 3, element 2) is comprised of a first peeling layer (such as Fig. 3, element 5), a pattern layer (such as Fig. 3, element 4), and a hiding layer (such as Fig. 3, element 3). These layers are disposed in the same order as they are written in the previous sentence (see for example Fig. 3, elements 5, 4, and 3) with the first peeling layer 5 disposed closest to the substrate film 1. Withdrawal of the §112, ¶2 rejection of Claim 6 is therefore respectfully requested.

As to Claim 7, this claim has been cancelled and its limitations have been incorporated into Claim 1. It is noted that the transferable scratch layer recited Claim 1 has been amended to further clarify that the transferable scratch layer has a “multilayer structure.” Thus, Claim 1 (incorporating the limitations of Claim 7) recites that the multilayer structure of the claimed transfer scratch layer (such as Fig. 2, element 2) is

comprised of a pattern layer (such as Fig. 2, element 4) and a hiding layer (such as Fig. 2, element 3). These layers are disposed in the same order as they are written in the previous sentence (see for example Fig. 2, elements 4 and 3) with the pattern layer 4 disposed closest to the substrate film 1. Withdrawal of the §112, ¶2 rejection of Claim 7 is therefore respectfully requested.

As to Claim 12, this claim has been amended to depend from Claim 6, which depends from Claim 1. It is noted that the transferable scratch layer recited Claim 1 has been amended to further clarify that the transferable scratch layer has a “multilayer structure.” Thus, Claims 1, 6, and 12 together recite that the multilayer structure of the claimed transfer scratch layer (such as Fig. 5, element 2) is comprised of a first peeling layer (such as Fig. 5, element 5), a pattern layer (such as Fig. 5, element 4), a hiding layer (such as Fig. 5, element 3), and an adhesive layer (such as Fig. 5, element 7). These layers are disposed in the same order as they are written in the previous sentence (see for example Fig. 5, elements 5, 4, 3, and 7) with the first peeling layer 5 disposed closest to the substrate film 1. Withdrawal of the §112, ¶2 rejection of Claim 12 is therefore respectfully requested.

As to Claim 17, it is noted that the claimed transferable protective layer has been amended for clarifying purposes that the transferable protective layer can be “either a monolayer or a multilayer” and has “at least a main protective layer.” The support for this claim is found at least in Fig. 12, elements 10a, 10b, and 10c. Thus, Claims 1, 15, and 17 together recite that the multilayer structure of the claimed transferable protective layer is comprised of a main protective layer (such as Fig. 12, element 10a) and an adhesive layer (such as Fig. 12, element 10c). These layers are disposed in the same order as they are written in the previous sentence (see for example Fig. 12, elements 10a and 10c) with the main protective layer 10a disposed closest to the substrate film 1. Withdrawal of the §112, ¶2

rejection of Claim 17 is therefore respectfully requested.

As to Claim 18, which also depends from Claim 15, Claims 1, 15, and 18 together recite that the multilayer structure of the claimed transferable protective layer is comprised of a peeling layer (such as Fig. 12, element 10b) and a main protective layer (such as Fig. 12, element 10a). These layers are disposed in the same order as they are written in the previous sentence (see for example Fig. 12, elements 10b and 10a) with the peeling layer 10b disposed closest to the substrate film 1. Withdrawal of the §112, ¶2 rejection of Claim 18 is therefore respectfully requested.

For the reasons above, Applicants respectfully request withdrawal of the rejections based on indefinites and also respectfully submit that the Claims 5-7, 11-12, 17-18, and 21 are now in condition for allowance.

Claims Rejections Under 35 U.S.C. §103

Claims 1-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,536,218 (Ganho) in view of U.S. Patent No. 5,196,080 (Mizobuchi), and U.S. Patent No. 6,308,630 (Kurokawa), and U.S. Patent No. 5,335,315 (Yoshida), U.S. Patent No. 4,124,947 (Kuhl). The “et al.” suffix appearing after a reference name is omitted.

In response, Claim 1 has been amended to incorporate the limitations recited in Claims 7 and 9. According to Claim 1 as amended, the thermal transfer sheet is provided with a transferable scratch layer having not only a hiding layer but also a pattern layer in a certain range of a pattern ratio, and when the scratch layer is transferred onto a printed information, it can exhibit an excellent hiding effect due to the through-vision preventive action of the hiding layer and to the surface camouflage action of the pattern layer (see the Specification page 16, lines 8-22; and page 48, line 21 to page 49, line 4).

As to the five references cited in the Office Action, the Applicants respectfully assert that they do not teach or disclose the presently claimed invention of the amended Claim 1 for the following reasons.

Ganho discloses a hiding coat formulation, but it is a printing ink composition to be used in lithography (see col. 1, lines 7-15; and col. 1, line 67 to Col. 2, line 14). Ganho does not describe that masking of a surface printed with a message is carried out by transferring a hiding layer from the thermal transfer sheet.

Mizubuchi discloses a thermal transfer sheet comprising a hot melt ink layer. However, Mizubuchi does not describe such a hiding layer that is transferable by the thermal transfer method and capable of being scratched off after transferred.

Kurokawa discloses a thermal transfer sheet comprising a transferable layer having a hologram. However Kurokawa also does not describe a hiding layer capable of being thermally transferred and scratched off after transferred.

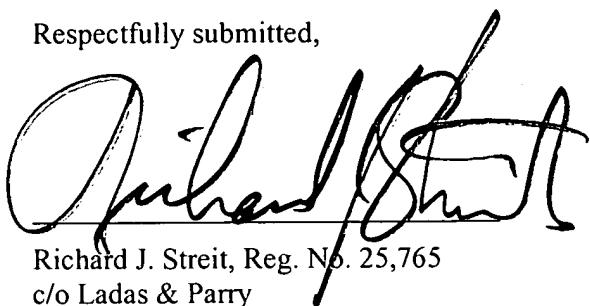
Yoshida merely discloses a method of determining a graphic area ratio of a printing plate. However, Yoshida does not teach that a hiding performance can be improved by providing a pattern layer on a hiding layer.

Kurl discloses a method to form a pattern by the intaglio printing. However Kurl also does not teach that a hiding performance can be improved by providing a pattern layer on a hiding layer.

For the reasons set forth above, Applicants respectfully submit that Claims 1-6, 8, and 10-25, now pending in this application, are in condition for allowance over the cited references. This amendment is considered to be responsive to all points raised in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of the

outstanding rejections and earnestly solicit an indication of allowable subject matter. Should the Examiner have any remaining questions or concerns, the Examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Richard J. Streit".

Dated: _____

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application: Daigo MORIZUMI et al.]
Serial No: 09/901,736] GRP ART UNIT: 1774
Filed: July 10, 2001] Ex.: Dicus, Tamra
For: SCRATCH LAYER TRANSFER]
SHEET AND METHOD OF]
PRODUCING SCRATCH PRINTING]
PRODUCT]

**CLAIMS - MARKED-UP VERSION
(IN THE REVISED FORMAT)**

1. (currently amended): A scratch layer transfer sheet comprising:
a substrate film; and
a transferable scratch layer disposed on one surface of the substrate film, the
transferable scratch layer having a multilayer structure comprising:
a pattern layer formed pattern-wise;
a hiding layer, being able to be thermally transferred to the print
surface of a transfer-receiving material and being able to be removed from the
print surface by scratching it after it is transferred
wherein the pattern layer and the hide layer of the multilayer structure
of the transferable scratch layer are disposed in the order of the pattern layer
and the hide layer with the pattern layer disposed closest to said substrate film,
and
further wherein, when the areas respectively occupied by said pattern
layer and said hiding layer are compared with each other, the proportion of the
area occupied by the pattern layer (pattern ratio) is in a range from 5 to 85%
per 2 cm² of the transferred scratch layer.



Henry

2. (original): The scratch layer transfer sheet according to Claim 1, wherein said hiding layer comprises a hiding material and a binder.
3. (original): The scratch layer transfer sheet according to Claim 2, wherein said hiding layer is formed of a heat meltable ink comprising an aluminum pigment, a carbon black, a wax and an ethylene/vinyl acetate copolymer resin.
4. (original): The scratch layer transfer sheet according to Claim 1, wherein the area of one partition of the transferable scratch layer of said scratch layer transfer sheet is in a range from 30 to 150% based on the maximum area of the print surface of the transfer-receiving material to which the transferable scratch layer is to be transferred.
5. (currently amended): The scratch layer transfer sheet according to Claim 1, wherein said transferable scratch layer after being transferred to the transfer-receiving material has a level of HB or less, and further wherein the level of HB relates to the as the pencil scratch value prescribed in the handwriting method of Japanese Industrial Standard (JIS) K-5400.
6. (currently amended): The scratch layer transfer sheet according to Claim 1, wherein said transferable scratch layer further comprises a first peeling layer and has a so that said first peeling layer, said pattern layer, and said hiding layer of said multilayer structure of said transferable scratch layer in which at least are disposed in the order of said first peeling layer, said pattern layer, and said hiding layer are disposed in this order from the side with said first peeling layer disposed closest to said substrate film.
7. (cancelled):
8. (currently amended): The scratch layer transfer sheet according to Claim 7 1, wherein said pattern layer is provided with pattern comprising a firm name, a logo or a specific mark.
9. (cancelled):

10. (currently amended): The scratch layer transfer sheet according to Claim 7 1, wherein said pattern layer contains at least one binder selected from a wax and a thermoplastic resin and/or a coloring agent.

11. (currently amended): The scratch layer transfer sheet according to Claim 7 1, wherein said transferable scratch layer further comprises a second peeling layer ~~and has a~~ so that the pattern layer, the second peeling layer, and the hiding layer of the multilayer structure of the transferable scratch layer in which at least are disposed in the order of said pattern layer, said second peeling layer and said hiding layer are disposed in this order from the side with the pattern layer disposed closest to said substrate film.

12. (currently amended): The scratch layer transfer sheet according to Claim + 6, wherein said transferable scratch layer further comprises an adhesive layer ~~and has a~~ so that first peeling layer, said pattern layer, said hiding layer, and said adhesive layer of said multilayer structure of said transferable scratch layer are disposed in the order of said first peeling layer, said pattern layer, said hiding layer, and said adhesive layer with said first peeling layer disposed in which at least said hiding layer and said adhesive layer are disposed in this order from the side closest to said substrate film.

13. (original): The scratch layer transfer sheet according to Claim 12, wherein said adhesive layer which is primarily constituted of a rubber type resin.

14. (original): The scratch layer transfer sheet according to Claim 13, wherein said rubber type resin is at least one type selected from the group consisting of an ethylene/vinyl acetate copolymer resin, its modified product and a copolymer of an ethylene monomer, a vinyl acetate monomer and other monomers.

15. (currently amended): The scratch layer transfer sheet according to Claim 1, said scratch layer transfer sheet further comprising a transferable protective layer having either a monolayer structure or a multilayer structure and being provided with at least a main

protective layer protecting a print surface, wherein the transferable protective layer and said transferable scratch layer are alternately provided side by side on said substrate film.

16. (original): The scratch layer transfer sheet according to Claim 15, wherein said main protective layer is primarily constituted of at least a wax or a thermoplastic resin.

17. (currently amended): The scratch layer transfer sheet according to Claim 15, wherein said transferable protective layer further comprises an adhesive layer ~~and has a~~ so that said adhesive layer and said main protective layer of said multilayer structure of said transferable protective layer in which at least are disposed in the order of said main protective layer and said adhesive layer ~~are disposed in this order from the side with said main protective layer disposed~~ closest to said substrate film.

18. (currently amended): The scratch layer transfer sheet according to Claim 15, wherein said transferable protective layer further comprises a peeling layer ~~and has a~~ so that said peeling layer and said main protective layer of said multilayer structure of said transferable protective layer in which at least are disposed in the order of said peeling layer and said main protective layer ~~are disposed in this order from the side with said peeling layer disposed~~ closest to said substrate film.

19. (original): The scratch layer transfer sheet according to Claim 1, said scratch layer transfer sheet further comprising a coloring agent transfer layer, wherein the coloring agent transfer layer and said transferable scratch layer are alternately provided side by side on said substrate film.

20. (original): The scratch layer transfer sheet according to Claim 19, wherein said coloring agent transfer layer contains a coloring agent which is optically distinguishable.

21. (original): The scratch layer transfer sheet according to Claim 19, wherein the color of said coloring agent transfer layer is different from the color of said transferable scratch layer.

Concluded

22. (original): The scratch layer transfer sheet according to Claim 19, wherein said coloring agent transfer layer is a heat meltable ink layer.
23. (original): The scratch layer transfer sheet according to Claim 22, wherein said heat meltable ink layer contains carbon black as a pigment.
24. (original): The scratch layer transfer sheet according to Claim 19, wherein the area of one partition of said coloring agent transfer layer is different from the area of one partition of said transferable scratch layer.
25. (original): The scratch layer transfer sheet according to Claim 1, the scratch layer transfer sheet further comprising a transferable protective layer and a coloring agent transfer layer, wherein the coloring agent transfer layer, the transferable protective layer and the transferable scratch layer are alternately provided side by side on the substrate film.

26-53 (withdrawn)
